

Claims 57, 60 and 61 have been canceled without prejudice and without disclaimer of subject matter.

Claims 24 and 27 are the only independent claims.

The specification was objected to under 37 C.F.R. § 1.75(d)(1) "as failing to provide proper antecedent basis and subject matter" as there is no disclosure in the original specification at image processing which cannot be performed in second copying mode is performed in the first copying mode as recited in Claims 60 and 61.

Claims 60 and 61 were rejected under 35 U.S.C. § 112, first paragraph, as failing to provide an enabling disclosure, as there is no disclosure in the original specification that image processing which cannot be performed in the second copying mode is performed in the first copying mode as recited in Claims 60 and 61.

The cancellation of Claims 60 and 61 has rendered the objection and rejection of those claims moot.

Claims 24, 27, 57, 59, 60 and 61 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,021,892 (Kita et al.).

Claims 26 and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kita et al. in view of U.S. Patent No. 5,218,458 (Kochis et al.).

Claim 58 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kita et al. in view of U.S. Patent No. 5,900,947 (Kenmochi et al.).

It is a feature of the invention as recited in the independent claims herein that a scanner is connected to an external computer by a first bidirectional general-purpose interface

and connected to a printer via a second bidirectional general-purpose interface of the same standard as the first bidirectional general-purpose interface. The device and method of the independent claims herein have a first copying mode of outputting image signals obtained by the scanner to the printer via the external computer, and a second copying mode of outputting image signals obtained by the scanner to the printer without the involvement of the external computer.

More specifically, in the first mode, the image signals from the scanner are transferred in the order of: the control unit, the first bidirectional general-purpose interface, the external device, the first directional general-purpose interface, a control unit and the second bidirectional general-purpose interface. In the second mode, the image signals from the scanner are transferred from the control unit to the second bidirectional general-purpose interface.

In this configuration, a normal copying operation is performed without the involvement of the external computer, and a copying operation attempted by a special editing operation is performed using the external computer. Thus, the configuration of this image processing apparatus is simplified, as well as the image processing apparatus being efficiently used.

In addition, since the external computer and the printer are connect to the scanner using two bidirectional interfaces of the same standard, the configurations for the connections have simplified, and a variety of computers and printers are connectable.

Kita et al. may teach the second copying mode of the present invention, however, Applicants' fail to find any teaching or suggestion of the first copying mode. Kita et al. (col. 6, lines 68 - col. 7, line 26) teaches an image input function of transferring an image read by

the scanner 2 to the computer 8, and an image print function of outputting an image in a computer to a printer 3. However, these two operations are independently performed, and there is no teaching that the computer 8 automatically couples these two operations. Hence, Applicants' respectfully submit that the first copying mode is not taught or suggested by these two operations of Kita et al.

Further, in Kita et al. these two operations are performed under the control of the computer 8, which corresponds to the external computer recited in the independent claims herein. Thus, Applicants' respectfully submit that it is clear that the device 1 in Kita et al., which corresponds to the image processing device recited in the independent claims herein, includes no control relevant to the image input function and the image output function. Further, Kita et al. does not specify the interface for connecting the computer 8 to the interface for connecting to the printer have the same standard, as recited in the independent claims herein. For at least those reasons, the independent claims herein are considered patentable over Kita et al.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Therefore, those claims are respectfully submitted to be patentable over the art of record.

The other claims in this application are each dependent from one or the other of the independent claims discussed above, and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants' respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

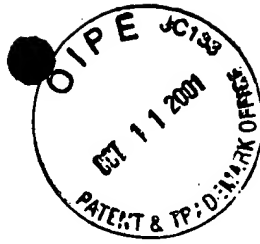
Respectfully submitted,


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OCT 17 2001

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24. (Five Times Amended) An image processing device comprising:

a scanner for inputting an image signal;

a control unit including a control circuit adapted for controlling said device and performing image processing necessary for copying on the image signal input from said scanner to provide a first processed image signal;

a first bidirectional general-purpose interface for transmitting the image signal input by said scanner under control of said control unit to an external computer, which performs image processing necessary for copying on the transmitted image signal to provide a second processed image signal, and for receiving the second processed image signal from the external computer; and

[an output circuit] a second bidirectional general-purpose interface of a same standard as said first bidirectional general-purpose interface adapted for outputting the first processed image signal and the second processed image signal to a printer,

wherein said device has a plurality of modes including a first copying mode, in which the image signal inputted from said scanner is outputted to said printer using the external computer, and a second copying mode, in which the image signal inputted from said scanner is outputted to said printer without using the external computer, the image signal from said scanner

also matter
being automatically transmitted in order of: said control unit, said first bidirectional general-purpose interface, the external computer, said first bidirectional interface, said control unit, and said [output circuit,] second bidirectional general-purpose interface in the first copying mode so as to perform copying based on the second processed image signal, and

the image signal from said scanner being transmitted in order of: said control unit and said [output circuit] second bidirectional general-purpose interface, in the second mode so as to perform copying based on the first processed image signal.

26. (Thrice Amended) The device according to claim 24, wherein the external computer includes a modem capable of processing the image signal received through said first bidirectional general-purpose interface and transmitting the image signal to a public telephone line.

27. (Five Times Amended) An image processing method for an image processing device, said method comprising the steps of:

inputting an image signal by a scanner;

performing image processing necessary for copying on the input image signal by using a control unit for controlling the image processing device to provide a first processed image signal;

transmitting the image signal input by the scanner under control of the control unit

to an external computer via a first bidirectional general-purpose interface to be processed, by image processing necessary for copying, into a second processed image signal;

receiving the second processed image signal from the external computer via the first bidirectional general-purpose interface;

outputting the first or the second processed image signal to a printer via [an output circuit] a second bidirectional general-purpose interface of a same standard as said first bidirectional general-purpose interface;

performing copying based on the second processed image signal in a first copying mode, in which the image signal inputted from the scanner is outputted to the printer without using the external computer by transmitting the image signal from the scanner in order of: the control unit, the first bidirectional general-purpose interface, the external computer, the first bidirectional general-purpose interface, the control unit, and the [output circuit] second bidirectional general-purpose interface; and

performing copying based on the first processed image signal in a second copying mode, in which the image signal inputted from the scanner is outputted to the printer without using the external computer by transmitting the image signal from the scanner in order of: the control unit and the [output circuit] second bidirectional general-purpose interface.

29. (Twice Amended) The method according to claim 27, wherein the transmitted image signal is processed by the external computer and transmitted to a public telephone line.

57. (Canceled)

58. The image processing device according to claim 24, wherein said scanner generates a color image signal.

59. (Amended) The image processing device according to claim 24, wherein said control unit has a density adjusting function.

60. (Canceled)

61. (Canceled)